This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims

1. (currently amended) A compound of formula (I):

$$R_2$$
 W_1
 W_1
 W_2
 W_2
 W_3
 W_4
 W_3
 W_4
 W_4
 W_4
 W_5
 W_7
 W_8
 W_9
 W_9

wherein:

one of R¹ and R² is selected from the group consisting of:

- a) -CO(CH₂)_jR⁴, wherein j is 1 to 6, and R⁴ is selected from the group consisting of:
 - 1) halogen;
- 2) -NR⁵R⁶, wherein R⁵ and R⁶ independently are hydrogen, substituted lower alkyl, unsubstituted lower alkyl, substituted aryl, unsubstituted aryl, substituted heteroaryl, unsubstituted heteroaryl, substituted aralkyl, unsubstituted aralkyl, lower alkylaminocarbonyl, or lower alkoxycarbonyl; or R⁵ and R⁶ are combined with the nitrogen atom to which they are attached to form a heterocyclic group selected from the group consisting of pyrrolidinyl, piperidinyl, piperidino, morpholinyl, morpholino, thiomorpholino, N-methylpiperazinyl, indolyl, and isoindolyl;
 - 3) N_3 ;

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- 4) -SR²⁷, wherein R²⁷ is selected from the group consisting of:
 - i) hydrogen;
 - ii) substituted lower alkyl;
 - iii) unsubstituted lower alkyl;
 - iv) substituted aryl;
 - v) unsubstituted aryl;
 - vi) substituted heteroaryl;
 - vii) unsubstituted heteroaryl;
 - viii) substituted aralkyl;
 - ix) unsubstituted aralkyl;
 - x) thiazolinyl;
- xi) $-(CH_2)_aCO_2R^{28}$, wherein a is 1 or 2, and R^{28} is selected from the group consisting of: hydrogen and lower alkyl; and
 - xii) -(CH₂)_a CONR⁵R⁶; and
- 5) OR^{29} (wherein R^{29} is hydrogen, substituted lower alkyl, unsubstituted lower alkyl, or CO_2R^{30} (wherein R^{30} is hydrogen, lower alkyl, substituted aryl, unsubstituted aryl, substituted heteroaryl, or unsubstituted heteroaryl);
- b) $-CH(OH)(CH_2)_bR^{4A}$, wherein b is 1 to 6 and R^{4A} is hydrogen or the same as R^4 ;
- c) -(CH₂)_dCHR^{3l}CO₂R³², wherein d is 0 to 5, R³¹ is hydrogen, -CONR⁵R⁶, or CO₂R³³ (wherein R³³ is hydrogen or lower alkyl), and R³² is hydrogen or lower alkyl;
 - d) $-(CH_2)_dCHR^{31}CONR^5R^6$;
- e) $-(CH_2)_k R^7$, wherein k is 2 to 6, and R^7 is halogen, $CO_2 R^8$ (wherein R^8 is hydrogen, lower alkyl, substituted aryl, unsubstituted aryl, substituted heteroaryl, or unsubstituted heteroaryl, $CONR^5R^6$, substituted aryl, unsubstituted aryl, substituted heteroaryl, unsubstituted heteroaryl, OR^9 (wherein R^9 is hydrogen, substituted lower alkyl, unsubstituted lower alkyl, acyl, substituted aryl, or unsubstituted aryl), SR^{278} (wherein R^{278} is the same as R^{27}), $NR^{10}R^{11}$ (wherein R^{10} and R^{11} are the same as R^5 and R^6) or N_3 ;
- f) -CH=CH(CH₂)_mR¹² wherein m is 0 to 4, and R¹² is hydrogen, lower alkyl, CO₂R^{8A} (wherein R^{8A} is the same as R⁸), -CONR⁵R⁶, substituted aryl, unsubstituted

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aryl, substituted heteroaryl, unsubstituted heteroaryl, OR^{9A} (wherein R^{9A} is the same as R^9), or $NR^{10A}R^{11A}$ (wherein R^{10A} and R^{11A} are the same as R^5 and R^6);

- g) -CH-C(CO_2R^{33A})₂, wherein R^{33A} is the same as R^{33} ;
- h) $-C \equiv C(CH_2)_n R^{13}$, wherein n is 0 to 4, and R^{13} is the same as R^{12} ;
- i) -CH₂OR⁴⁴, wherein R⁴⁴ is substituted lower alkyl;

and the other of R¹ or R² is selected from the group consisting of

- j) hydrogen, lower alkyl, halogen, acyl, nitro, NR¹⁴R¹⁵ (wherein R¹⁴ or R¹⁵ is hydrogen or lower alkyl, and the other is hydrogen, lower alkyl, acyl, carbamoyl, lower alkylaminocarbonyl, substituted arylaminocarbonyl or unsubstituted arylaminocarbonyl);
 - k) -CH(SR³⁴)₂, wherein R³⁴ is lower alkyl or alkylene;
- l) $-CH_2R^{35}$, wherein R^{35} is OR^{36} (wherein R^{36} is tri-lower alkyl silyl in which the three lower alkyl groups are the same or different, or is the same as R^{29}), or SR^{37} (wherein R^{37} is the same as R^{27});
 - m) -CO(CH₂)_qR¹⁶, wherein q is 1 to 6, and R¹⁶ is the same as R⁴;
 - n) -CH(OH)(CH₂)_eR³⁸, wherein e is 1 to 6, and R³⁸ is the same as R^{4A};
- o) $-(CH_2)_f CHR^{39}CO_2R^{40}$, wherein f is 0 to 5, R^{39} is the same as R^{31} and R^{40} is the same as R^{32} ;
 - p) $-(CH_2)_rR^{17}$, wherein r is 2 to 6, and R^{17} is the same as R^7 ;
 - q) -CH=CH(CH₂)_t R^{18} , wherein t is 0 to 4, and R^{18} is the same as R^{12} ;
 - r) -CH= $C(CO_2R^{33B})_2$, wherein R^{33B} is the same as R^{33} ;
 - s) $-C \equiv C(CH_2)_u R^{19}$, wherein u is 0 to 4, and R^{19} is the same as R^{13} ;

R³ is hydrogen, acyl, or lower alkyl;

X is selected from the group consisting of:

- a) hydrogen;
- b) formyl;
- c) lower alkoxycarbonyl;
- d) -CONR²⁰R²¹, wherein:

R²⁰ and R²¹ independently are:

hydrogen;

lower alkyl;

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-CH₂R²², wherein R²² is hydroxy, or

-NR²³R²⁴ (wherein R²³ or R²⁴ is hydrogen or lower alkyl, and the other is hydrogen, lower alkyl, or the residue of an α -amino acid in which the hydroxy group of the carboxyl group is excluded, wherein said α -amino acid is glycine, alanine, proline, glutamic acid, or lysine, or R²³ and R²⁴ are combined with the nitrogen atom to which they are attached to form a heterocyclic group selected from the group consisting of pyrrolidinyl, piperidino, morpholinyl, morpholino, thiomorpholino, N-methylpiperazinyl, indolyl, and isoindolyl); and

e) -CH=N-R²⁵, wherein R²⁵ is hydroxy, lower alkoxy, amino, guanidino, or imidazolylamino;

Y is hydroxy, lower alkoxy, aralkyloxy, or acyloxy; or

X and Y combined represent, -X-Y-, =O, -CH₂O(C=O)O-, -CH₂OC(=S)O-, -CH₂NR²⁶C(=O)- (wherein R^{26} is hydrogen or lower alkyl), -CH₂NHC(=S)O-, -CH₂OS(=O)O-, or -CH₂OC(CH₃)₂O-; and

W¹ and W² are hydrogen, or W¹ and W² together represent oxygen;

wherein said substituted aryl, said substituted heteroaryl, said substituted aralkyl, or said substituted arylaminocarbonyl comprises 1 to 3 independent substitutions selected from the group consisting of lower alkyl, hydroxy, lower alkoxy, carboxyl, lower alkoxycarbonyl, nitro, amino, mono-lower alkylamino, di-lower alkylamino, and halo;

wherein said substituted lower alkyl, said lower alkoxy, said substituted lower alkoxycarbonyl, and mono-lower alkylamino or di-lower alkylamino comprises 1 to 3 independent substitutions selected from the group consisting of hydroxy, lower alkoxy, carboxyl, lower alkoxycarbonyl, nitro, amino, mono-lower alkylamino, di-lower alkylamino, dioxolane, dioxane, dithiolane, and dithione;

wherein said heteroaryl is pyridyl, pyrimidyl, pyrrolyl, furyl, thienyl, imidazolyl, triazolyl, tetrazolyl, quinolyl, isoquinolyl, benzoimidazolyl, thiazolyl or benzothiazolyl; or a pharmaceutically acceptable salt thereof.

2. (original) The compound of claim 1 wherein:

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a) one of R^1 and R^2 is selected from the group consisting of $-(CH_2)_k R^7$, $-CH=CH(CH_2)_m R^{12}$, $-C\equiv C(CH_2)_n R^{13}$, $-CO(CH_2)_j SR^{27}$ and $-CH_2OR^{44}$, wherein R^{44} is methoxymethyl, ethoxymethyl, or methoxyethyl;

and the other of R^1 and R^2 is selected from the group consisting of - $(CH_2)_R R^{17}$, -CH=CH(CH₂)_t R^{18} , -C=C(CH₂)_u R^{19} , NR¹⁴ R^{15} , hydrogen, halogen, nitro, -CH₂O, substituted lower alkyl, unsubstituted lower alkyl, -CO(CH₂)_qSR²⁷, -CH₂R³⁵, wherein R^{35} is OR³⁶, and -CH₂SR³⁷, wherein R^{37} is selected from the group consisting of lower alkyl, pyridyl, and benzimidazole;

- b) k and r are each 2, 3, or 4;
- c) j and q are each 1 or 2;
- d) R^7 and R^{17} are:
- 1) selected independently from the group consisting of: phenyl, pyridyl, imidazolyl, thiazolyl, or tetrazolyl; or
 - 2) selected pairwise, from the group consisting of:
- i) $-CO_2R^8$ and CO_2R^{8A} , where R^8 and R^{8A} , independently, are hydrogen, methyl, ethyl, or phenyl;
- ii) -OR⁹ and -OR^{9A}, where R⁹ and R^{9A}, independently, are hydrogen, methyl, ethyl, phenyl, or acyl;
- iii) -SR^{27B}, where R^{27B} is selected from the group consisting of unsubstituted lower alkyl, 2-thiazoline, and pyridyl; and
- iv) -NR¹⁰R¹¹ and -NR¹⁴R¹⁵, where R¹⁰, R¹¹, R¹⁴, and R¹⁵, independently, are selected from the group consisting of hydrogen, methyl, ethyl, phenyl, carbamoyl, and lower alkylaminocarbonyl;
- e) R²⁷ is selected from the group consisting of substituted lower alkyl, unsubstituted lower alkyl, substituted phenyl, unsubstituted phenyl, pyridyl, pyrimidinyl, thiazole, and tetrazole;
- f) R³⁶ is selected from the group consisting of methoxymethyl, ethoxymethyl, and methoxyethyl;
 - g) m, n, t and u each is 0 or 1; and
 - h) R¹², R¹³, R¹⁸, and R¹⁹ are independently selected from the group

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consisting of hydrogen, methyl ethyl, phenyl, pyridyl, imidazole, thiazole, tetrazole, $-CO_2R^8$, $-OR^9$, and $NR^{10}R^{11}$, wherein R^8 , R^9 , R^{10} , and R^{11} each is hydrogen, methyl, ethyl, or phenyl.

- 3. (original) The compound of claim 2, wherein R^3 is hydrogen or acetyl, X is hydroxymethyl or lower alkoxycarbonyl, Y is hydroxy or acetyloxy, and W^1 and W^2 are hydrogen.
- 4. (original) The compound of claim 3, wherein X is methoxycarbonyl, Y is hydroxy, and R³ is hydrogen.
 - 5. (previously presented) The compound of claim 3 wherein:

one of R^1 and R^2 is selected from the group consisting of methoxycarbonylvinyl, ethoxycarbonylvinyl, styryl, 2-pyridylvinyl, 4-pyridylvinyl, 2-pyridylethyl, 4-pyridylethyl, phenylethyl, methoxypropynyl, hydroxypropynyl, -COCH₂SEt, -C=CCH₂NMeBn, -CH=CHEt, -(CH₂)₂SMe, -(CH₂)₂S-2-thiazoline, -(CH₂)₃SMe, -CH=CH-2-imidazole, (CH₂)₂OC(=O)H, methoxymethoxymethyl, ethoxymethoxymethyl, methoxyethoxymethyl, and 2-hydroxyethyl; and

the other of R¹ and R² is selected from the group consisting of hydrogen, halogen, methoxycarbonylvinyl, ethoxycarbonylvinyl, styryl, 2-pyridylvinyl, 4-pyridylvinyl, 2-pyridylethyl, 4-pyridylethyl, phenylethyl, nitro, amino, N-ethylurea, methoxypropynyl, hydroxypropynyl, -COCH₂SEt, -C=CCH₂NMeBn, -CH-CHEt, -(CH₂)₂SMe, -(CH₂)₂S-2-thiazoline, -(CH₂)₃SMe, -CH₂OMe, -CH₂OEt, -CH₂SEt, pyridylthiomethyl, -CH₂S-2-benzimidazole, -CH=CHEt, -CH=CH-2-imidazole, -(CH₂)₂OC(=O)H, methoxymethyl, ethoxymethoxymethyl, methoxymethyl, and 2-hydroxyethyl.

Claims 6-22 (canceled)